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Mental Calisthenics

OR

PHYSIOLOGICAL • MEMORY

BY

Rev. G. A. SCHRAM

The Natural Powers and Processes of Attention and Recollection Placed under Intelligent and Perfect Control of the Will

MIND-WANDERING QUICKLY CURED

The Power to Learn and Recollect more than doubled immediately

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MENTAL CALISTHENICS

OR

PHYSIOLOGICAL MEMORY

THE NATURAL LAWS AND PRINCIPLES GOVERNING THE INTELLECTUAL PROCESSES.

IT IS POSITIVELY A NEW DEPARTURE ON THE SUBJECT OF ATTENTION AND MEMORY.

NO MNEMONICAL TRICKS USED.

ATTENTION ENGAGED ONLY WITH THAT WHICH IS TO BE LEARNED.

THE METHOD APPLIES TO EVERYTHING THAT CAN POSSIBLY ENGAGE ATTENTION.

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BY

REV. G. A. SCHRAM

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PREFACE.

In presenting this little book to the reader, I feel that a few words by way of introduction will not be amiss.

I am fully aware of the boldness of my undertaking to write upon a subject of so vast importance, and, withal, one whose practical side has so long evaded the pursuit of the thousands who have tried to capture and bring it forth to the light of day.

I apprehend that the first thought of the reader may be to consign the book to the fate of the "mnemonical systems" preceding, "whose name is legion," but are generally worse than useless.

But trusting to the forbearance of the reader, where he does not find the subject put with sufficient perspicuity and fullness to suit him, I send it forth with a confidence born of personal verification.

A few years ago I found myself a wreck in nerves and memory. I had so completely lost the power of sustained mental effort, that for two years I could not read a column in a newspaper. This

was brought about by such fool-hardiness as studying sixteen hours a day for months in succession.

My power of prolonged continuity in study, is, I believe, permanently gone. Two hours of continuous application without rest is all I can endure at this date, fifteen years after my breakdown. Yet in these two hours I can do more effective study by the method set forth in this book, than I could do in six hours before my loss of strength, and before I discovered my new method.

I am the more confident, because similar results are produced in other persons by my method.

I have not aimed at treating the subject exhaustively.

The earlier pages of the book are given somewhat to theoretical aspects of the subject, but the latter part is practical.

The reader may pass at once to the practical parts if he wishes to do so, and will find equally good results, if he follows my directions.

I have found it difficult to decide just what to write and what to leave unsaid.

There may be points on which some may desire fuller explanations or instructions; I therefore hold myself in readiness, as far as possible, to answer any

question in harmony with the purposes of the book, and without cost to the student beyond postage.

The reader will find some repetition in the book. This I have indulged in, that I may the more fully impress certain truths vital to the subject and method set forth.

The moment the reader gets the meaning of the book and applies it, he will realize the soundness of the principles presented, and yet he will find that it unfolds more and more in its endless application to all our intellectual activities.

Again let me urge that if any of my readers do not find that there is a wonderful improvement in their power to pay attention and to recollect, after carefully studying and using my method, they will immediately write to me explaining their difficulties.

Non-improvement will be a proof that you have not understood nor applied my method.

THE AUTHOR.

MENTAL CALISTHENICS.

BE pupils, not critics.

Do not class my methods with the hundreds of attempts made by others to aid the memory by inventing devices to bolster and prop it up.

Neither must it be supposed that I or any other person can give powers or faculties that the reader does not already possess.

Many persons suppose that good and bad memory are alike natural endowments for which the possessor is not responsible, and cannot change.

All natural memory is good and reliable. Bad memory is the result of artificial or perverted use of the natural powers and faculties, excepting in cases of nervous derangement, weak digestion, and poor blood.

It is to point out nature's method that I have undertaken this work, having first verified the soundness of each principle and method presented.

Having familiarized myself with nearly all the devices and tricks used by Mnemotechnists, I entirely discard their use as being burdensome, confusing, and hurtful. They are unnatural, and usually productive of the very evils they profess to remedy or cure. Their authors seem never to have discovered how and what it is that we come to know in gaining knowledge, and what and how it is again made present to the mind in *Recollection*. This must first be understood, then each successive step will be easy, natural, and clear.

I shall at once proceed to my work by asking and answering a few questions, hoping thereby to lead the reader by easy steps to grasp the basal truths of the following pages.

CHAPTER I.

What is the Material of Knowledge?

IN a word it is anything of which we may become conscious, of which the world about us furnishes a great variety; objects to be seen, sounds to be heard, odors to be smelt, flavors to be tasted, pain or pleasure to be felt, etc.

For the perception of these we are endowed with special senses, which constitute the machinery of the mind. This machinery is composed of sentient nerve matter, divided or arranged appropriately for the special uses intended, and having an exterior end organ, upon which the corresponding object of sense may act, and thus set up a commotion along the whole nerve-tract, and corresponding brain-centre. And it is really this nerve-commotion, or modified condition that the mind comes to perceive, and not the object that has produced it. This will be clear

to the reader if he will but think what would be the condition of the mind and the amount of knowledge if we had none of these special senses, nor any sensitive nervous organs whatever. We could evidently know nothing.

But the Creator has wonderfully adapted us to our environment, by giving us a nervous mechanism —divided into special senses, by the proper use of which the mind may become conscious of, pay attention to, come clearly to perceive, and afterwards to re-present the same before the mind without having it actually present to the end-organs of sense (eyes, ears, etc.). Absence of one of these senses from birth prevents all knowledge, such as it might have been a channel for the reception of; *e. g.*: one born blind has no true conception of what it is to see light, color, form. He may feel, but that is entirely different.

So of deaf mutes, sound to them does not exist. They can feel a jar or the beating of a drum, but cannot hear.

From the foregoing we gather three facts:

1. That the primary matter of our knowledge is

composed of what may be seen, heard, felt, tasted, smelt, etc.

2. That the only media of communication between these and the mind are our special senses, or, in a word, the nervous system, in a normal condition, or sufficiently so to admit of the mind's perception of the kind of nerve-commotion, and which of the special senses it is that is so impressed.

3. That the kind and clearness of our perceptions and knowledge is limited by the kind and degree of nervous action, and the clearness of our perception of the same.

Personal knowledge of the world about us requires but attention to the impressions received through the nervous organism. But man's social conditions and relations have required some means of conveying to one mind what was present to another. This might be done in one of two ways.

(1) By presenting to the senses of the one that which was formerly present to the senses of the other, and is now present only to mind and the inner nerve mechanism.

(2) He might use such gestures as would pre-

sent the same before the mind, as the deaf mute does.

(3) He might use sounds, whose meaning had first been fixed by being associated with the object indicated.

(4) Certain marks or written signs might be used whose meaning had been fixed.

In this work I am concerned chiefly with word-signs—spoken, and written.

Now a word, whether it comes to us as a sound impressing the ear, or as a written sign impressing the eye, is in itself simply a sense-object (*i. e.* something that can impress one of the special senses); as such it may mean nothing to us and convey nothing to the mind other than the fact of the peculiar ear or sight impression it produces.

But what is a word in its common use? "A sign of an idea," says one. Not so, but it is a sign of a sense object: nothing more; *i. e.*, over against every word of our own or any other language, there stands a sense-object, and *vice versa*. *e. g.*, I say horse, and instantly there is presented before your mind the kind of an animal we drive before the

buggy. If I say white horse, the same is true with the addition of color which you see in the shape of a horse.

If I say the horse neighs, the sense object is still more extended and his neighing becomes a sense-object to the ear, and the act of neighing a sense-object to sight.

Hence words, whether spoken or written, are but arbitrary signs taken to re-present to mind, things, qualities, relations, actions, etc., that have been previously present to mind with such words as signs of the same.

These, and not the words, are the real and ultimate objects of perception, to be made present and distinct before the mind by means of the words. There may be the same thought, or sense-object presented to mind by different words, or words of different languages. *Tree* means to me, or rather brings to me, that object which grows on the lawn. But I hear two Germans talking and they say *baum*. I am told that *baum* is the word for that same object. The object of which I know is that form growing on the lawn.

To a person of any other language the same object would be presented or represented to mind by the word in his language used as a name for that object. *Knowledge is the same knowledge in all languages.*

If the words we see or hear are new to us, they present nothing to mind but their form and the letters they contain, and can never be understood until their corresponding *sense-object* is in some way presented to mind. The two then become associated together as impressions, each becoming a part of one complete complex record in memory.

Hence all understood word signs have their interpretation in the re-presentation of the corresponding object, and so a process of recollection is carried on as we see or hear familiar words. The sentences may convey different complete notions from any previously heard, but they are composed of well-known thought-objects constructed into new forms.

I shall show later that this tends greatly to produce mind-wandering.

The *one first* thing to be clearly understood, and for which I have tried to prepare the student, is that

the mind primarily engages itself through the senses, with whatever stimulates these senses. And these *stimuli* I will call (for the sake of having a convenient common name for them) SENSE OBJECTS, and for that which is represented to mind in recollection I use the term THOUGHT OBJECTS.

What is seen is a *Sense-Object* to sight, *sounds* are *sense-objects* to hearing, and *odor* to *smell*, a *flavor* to *taste*, etc.

So we may say that a *perception* is a distinct presentation of a *Sense-Object* to the mind, through the special senses engaged therewith.

A Recollection (or re-perception) is a presentation before the mind of that which was at some past time, but is not now actually present to it, but is represented by something corresponding closely therewith—sometimes called a *mental image*, but the mind does not deal with it, nor think of it as an image during the mental processes of recollection, and of intelligent reading or listening, but it treats it as the veritable sense-object. As the whole process is entirely internal, and independent of the external object and the outer end-organ of sense, I

have termed it *Thought Object.* Do not confound these two terms.

That I may make the lessons the better understood, and prepare the students to take each step in their progress intelligently, I shall first make a brief

I. Analysis of Recollection.

II. I will show the process in Recollective Synthesis, or building from the most indefinite state of consciousness of impression to distinct perception and power to reproduce the same before the mind afterwards in Recollection.

III. I will explain the law of *Reciprocal* Predication, or the law governing the Recollective process.

IV. The Golden Link.

V. Certainty of Recollection.

VI. Exercises and suggestions.

CHAPTER II.

Analysis of Recollection.

1. What is a Recollection?

The common idea is that thought is a kind of *entity* acquired by the mind--that as such it some how exists in the mind, perhaps like documents stowed away in pigeon holes for future use, and that Recollection hunts them up and brings them out from their hiding place when required, somewhat as one would go to his library and find a favorite book when needed.

The old philosophers treated the subject much in the same way. With them memory was the retention of ideas unconsciously in the mind, and Recollection was the act of bringing them back to consciousness. But this is both untrue, and impossible. To ask, "Where is the thought you had at some

previous time?" can receive no true answer but NOWHERE.

What is an idea or thought? Surely it has no material existence, that the mind should be able to treat it as a boy does his peanuts when he puts them in his pocket for future use.

Is it not evident that thoughts and ideas bear the same relation to the mind that movements and definite acts do to the muscular powers! Where, then, is the action of yesterday? Nowhere of course. It is past, you have not hoarded it up, nor could you do so. But you may repeat it, and so may the mind think the same again by having the same processes which led thereto, repeated. *Thought* is the mind in action — ideas are the result of such mental activity, during the process of perceiving, analyzing — constructing the *sense* objects presented through the senses, or in re-perceiving, re-analyzing, and re-constructing the same when presented to mind in *Recollection.*

By a little *introspection*, or study of one's own mental operations in recollecting, the following will be apparent, viz:

(1) That in Recollection we get a past thought or idea before the mind, or in the mind again, *i. e.*, we again think the same thoughts that we thought at some former time.

(2) That back of and prior to the thought, there is present to mind a thought-object, about which we think, from which the thought is inseparable and without the presence of which, the thought is impossible.

The Thought-Object comes to mind first, then the processes of thought begin, but end or change in subject as soon as the Thought-Object vanishes from mental vision, or is changed for another.

(3) That in every distinct recollection there is a representation to mind of all that was previously present to it through the senses, and in the same order of parts, and that, too, *not by bringing the past up to the present, but by translating one's self to the past, i. e.*, one seems to be again at the same place —surrounded by the same objects, feeling the same experiences, and always in the same relation to one another as when first witnessed, and there is the same ability to contemplate one feature in particular

or all in general, and in any order desired, as from first to last or from last to first—or from a given point either way. We also find that as we thus re-perceive or recollect, we not only experience a repetition of former thought, but may extend thought respecting these *Thought-Objects*.

We can exercise a creative, or constructive force of mind and put these familiar objects into new combinations and relations so as to produce an altogether different whole.

(Here lies the basis of imagination.)

To illustrate *No. 3*, take the following:

I once visited Niagara Falls, with my sister. And now as I recall that visit, I seem to be with the same sister standing in the same spot, viewing the falls—in every direction about me are the same objects—and as each scene is repeated before the mind the same thoughts recur.

These objects bear the same relation to one another before my mind now as then—the eye passes from one object to another in the same order, *i. e.*, each part joins each other part now as then—thus making up the complete scene.

Nor is it a matter of sight only. I heard the great roar of the cataract, and this is repeated in my recollection not as a thought only, but as a roaring, then comes the thought or idea.

So, too, of the other senses.

Again, each Thought-Object has its individual quality as then. It appears before the mind possessing that quality. *e. g.* The river had not only banks, but they were perpendicular. I mentally see them again in recollection. The falls were of great volume, and curved; a dense, whitish mist arose, a beautiful rainbow was reflected from them, so that every thing or quality becomes objective to the particular sense concerned. But if objective, then there must be a certain degree of corresponding activity in that part of our organism through which these are originally perceived. (See Prof. Geo. T. Lad, in Physio. Psychology. M. Ribot, on Diseases of Memory, and others of recent date.)

(4) There is usually a conscious effort, in Recollection, to revive or repeat the conditions under which the original perception was acquired, an effort to translate one's-self to the time, place,

circumstances, surroundings, etc. Having accomplished this, or probably, too, in accomplishing it, there is a more or less conscious effort to see, hear, feel, etc., that of which we are in search; and yet the effort is usually entirely confined to an internal effort. The outer organ of sense is seldom used in such case, never, indeed, unless the person concerned is actually surrounded by the original conditions. Thus a boy in school is asked to tell a number that was written upon the blackboard yesterday, and he may look at the very spot on the board where he saw it written, but if asked the question out of school he mentally sees the board, its color, etc.—looks at that part upon which the number was written, then begins to arise into the field of mental vision, the objects (figures) that he saw on that part of the board yesterday. They come distinctly, not all at once, but as many together as were originally included in one act of perception.

This effort to see, hear, etc., in trying to Recollect, is perfectly natural. It is an effort to have the same nervous action repeated that took place prior to, and continuing while the mind originally perceived.

If this can be repeated, the same mental results will follow. This may be accomplished by a voluntary effort of mind, beginning with the point of present view, and following a series of associated objects of sense until the desired link in the chain is reached, just as in recalling some scene or experience in travel we quickly pass along over the familiar steps till we reach that particular stage desired.

Or it may be involuntary, in which case what is now present to mind has resulted from nervous activities similar to those originally produced by some other *sense*-object. Thus the seeing or recollection of O, may revive the recollection of Q, because, excepting the tail, they are alike; or to read of a journey may revive the recollection of one once taken by yourself. Or it may result from the fact that what is present to mind once formed part of a complex object of perception. *e. g.*, I once saw in a trades' procession, a mottled soap firm led by a man on a pure white horse, stained all over with spots of blue, and ever since when I see a white horse in such a position there is revived in recollection the white horse and his blue spots.

The white horse that I may see to-day has revived a part of the same nerve commotion produced by the blue-white horse originally, and so the remainder of the neural action as a part of the original is reproduced and thus the mind reads it—or rather reperceives it. Another, and familiar illustration is found in a *lapsus linguæ*,—beginning to pronounce a word correctly but ending with a syllable that makes it a word of entirely different meaning from that intended. *e. g.*, A person of my acquaintance wished to say that a certain thing was magnet*ized*, but he said it was magni*fied*. Occasionally similarity of sound will for the same reason result disastrously. I overheard two ministers laughing about another, who intended to recite the stanza,

> "Soon as the evening shades prevail,
> The moon takes up the wondrous tale,
> And nightly to the listening earth
> Proclaims the story of her birth."

But alas! he got switched off on the similarity of sound, even without sense, and said:

> "Soon as the evening shades prevail,
> The moon sticks up his wondrous tail," etc.

(5) Personal experience shows that we never recognize a thought as a recollection whose *object* does not come to us (*a*) without the outward stimulus of the *sense-object*, and (*b*) when it is so represented it is familiar to us as belonging to past time, and certain associations with place, and other Objects. (*c*) That which has been perceived when the physical conditions of the body were the best, the blood richest, and most active, was most easily recollected. (*d*) That we find it hard to recollect when the vital forces are weak from any cause, such as indigestion, poor blood, weariness, nervous derangement, either from disease, fear, or extreme excitement.

In concluding this chapter I make the following summary statement of the conditions necessary to every recollection.

1. A highly sensitive nervous organism susceptible of a great variety of stimulus.

2. Sense-Objects or stimuli, which through the end-organs of sense produce nervous activities in the corresponding nerve particles, and tracts.

3. An original impression or nervous modifica-

tion, and adjustment to the new conditions resulting from the stimuli.

4. A *Record*, or abiding modification of the nerve particles concerned, so that there is an aptitude to repetition of the same activities whenever appropriate stimuli are present.

5. A *revival of the record*, or repetition of the original nervous behavior, and its perception by the mind, thus producing that condition known as a *recollection*.

We may, therefore, still more briefly state the stages or parts in Recollection, as being:

(1) An original impression of the nervous mechanism concerned.

(2) A permanent modification and adjustment of the same to the impression.

(3) A revival or repetition of the original behavior of the same nerve particles concerned.

The possibility of Recollection depends upon an acquired tendency of the nerve-particles to repeat a former mode of action, because there cannot be represented to mind what was not previously pre-

sent to it, and it cannot be represented without the original nerve commotion being first revived.

The student will find that the following pages will make the foregoing chapter clear to his mind.

He is now to begin the more practical part of my subject. I therefore earnestly beg of him to proceed only as fast as he is able to verify to himself the naturalness and effectiveness of my methods.

All questions asked by *mail* concerning parts that may not be clear, I will take great pleasure in answering, and without cost to the student, excepting postage.

CHAPTER III.

Recollective Synthesis.

IN this chapter I desire to present, not a device, or plan, or invention, or series of tricks, by which the student may do some astonishing things, but *nature's method*, the method pursued instinctively by all until they are led from it by some of the artificial tricks of teachers—or by the almost certain tendencies of learning from books and at second hand, generally.

The first stage in the process of coming to know, and in being able to recollect is (for I hold that all we know is possible of recollection),

I. A condition of impression.

This is a phase of consciousness, but in its first stage very indefinite. It is simply consciousness that one is impressed or thrown into a condition of nerv-

ous action along the nerve-tracts of one or more of the special senses.

This nerve commotion is a kind of *alarm-bell* to the mind, and leads to investigation of the cause by the latter.

The cause or stimulus is always a sense-object acting upon the appropriate special sense.

I call attention here to the fact that there are two kinds of sense-objects.

1. Those that are in nature, correlated to the special senses—as sights, sounds, odors, etc.

These naturally and directly impress the corresponding senses.

2. Those which, though sense-objects in themselves, are but signs of other sense-objects which are not now present to the senses, such as words, spoken or written, also sentences, figures, scientific formulæ, etc. They have no existence for their own sake, but are intended to represent to mind that for which they are used as signs. At this stage of the subject however it is sufficient to treat word-signs as we do real objects in nature, *i. e.*, as things that are capable of producing nervous impression. *e. g. A mountain* is

an object to be seen, so is the word *mountain*, or if spoken, it is heard and becomes a sense-object to the hearing. Although the first phase of conscious impression is very indefinite it serves to—

II. Arrest attention, and at this point begins the process of *record*-making, so important to (after) recollection.

Let us try to get a clear understanding of what attention is, and how we exercise it.

1. Attention is to special sense and mind what *tension* is to the muscles. If I grasp and hold a weight steadily at arm's length, there is tension of muscle, an application of the strength of certain muscles to the weight. So, too, in attention, certain nerve particles and tracts are impressed. They are then held steadily in an attitude suitable to the continuance of the impression, until the mind clearly perceives.

Attention is to future recollection what the act of taking a negative is to the future picture to be taken from it. If the negative is defective, so will the picture be.

The negative is prepared by exposing a sensi-

tive plate to light and shadow reflected from the original object. The plate and object must be held in such relation to one another that the lines of light and shade fall steadily in the same places upon the sensitive plate. If there is movement in either the negative will be blurred, and the picture imperfect and perhaps unrecognizable.

So if attention is unsteady, turning from one object to another, the impression will be dim and confused. This is why mind-wandering makes recollection almost, if not quite, impossible, because the negative, or record in the nerves concerned is a combination,—a mixture, very much as if I were to write a dozen letters upon the same place.

Attention, then, may be said to be the fixation of the sense concerned upon the stimulating object, and the undivided direction of the mind towards the impression then present to consciousness.

2. Attention in its process is both Analytic and Synthetic.

There is no such thing as attention in general—it is always particular, if it is attention at all.

The limit of one act of perfect attention is very

small. This you may verify by placing a few marbles on a table, then try how many you can perceive by one act of attention, and you will find that five or six is the utmost limit. Even with these numbers you will find yourself grouping into *two, and three, three, and three*, etc.

Or if you study a landscape, or any large collection of objects, you take them one at a time. There is first a general impression of the whole, or a considerable part of it, but the moment that attention begins, it fixes upon particular features to the exclusion of all others. *e. g.*, A landscape may be the study. It contains a number of objects. You immediately begin to analyze the scene by fixing upon some prominent object. Suppose it is a tree. You observe that it is a green tree, perhaps the kind of tree—its shape—where in the landscape it is situated, etc. Having completed the study to your satisfaction, your eye falls upon something else near the tree which you now study to the exclusion of every other object. Having acquired a distinct perception of the latter, you have now a scene of two objects distinctly perceived. You know them

individually and unitedly—that is, in the particular relation in which you observed them to exist.

You have therefore two perceptions in one. The union of the two into one (complex perception) has been effected by fixing the attention upon their relation, which has also become a matter of perception. This relation can have no existence apart from the objects related. It is no part of the objects, and yet is a part of the general effect of the scene, and without it there can be no certain recollection. (I shall have occasion to refer to this matter again, so drop it for the present.)

In pursuing the process of attention the next object is taken up in a similar way with its relations to the one just previously present to mind, and so throughout the whole landscape. Hence, as I have said, attention is both *analytic* and *synthetic*. It severs a whole into parts, and again rebuilds, as it advances.

I have used an illustration of sight-objects—but the student will readily see that the same principles apply in relation to all kinds of sense-objects although they may be ever so much mixed.

3. Attention is of two kinds—

(1) Involuntary or spontaneous. (2) Voluntary.

In the former the interesting nature of the objects of attention is such that they compel attention. In the latter, they are so uninteresting that you must compel attention, if you pay attention at all.

In the former the process of attention is sure to be perfectly natural—in the latter it will almost certainly be artificial. Indeed, these two have been called respectively *natural* and *artificial* attention, which is incorrect, however, unless it can be shown that man does not possess the power of volition in attention. If man is to "get wisdom, and with all" his getting to "get understanding," as Solomon advises, he certainly must exercise some will power and pay attention where he is not compelled to do so by the very nature of the subject.

It has been said that in voluntary attention we "clothe our subject with an interest that it does not naturally possess." This is not so. If it were it would be a process of attention to the matter in question and something else. In other words it would be putting sugar in the coffee to make it palatable,

then declaring that the taste was that of pure coffee.

During the process of Voluntary attention we add *no new feature or element to the subject, nor do we adopt any artificial methods*, unless through ignorance. What we do is to pursue the analytic and synthetic method already described.

Voluntary attention is not only superior to the involuntary, as a power of the mind, but also as regards utility, and results. Yet the two are ever in conflict—producing that bane of most persons, called *mind-wandering.* There are two phases of mind-wandering. Mind-wandering proper, in which the suggestive character of the matter of voluntary attention has revived a recollection with which the attention begins *involuntarily* to engage itself to the exclusion of the other. This is very likely to be the case with brainy people of an active nervous temperament, and the more they know, the more likely this is to be the case. The other phase of mind wandering may more correctly be called *mind-balking.* It is simply a cessation of attention, a dropping into a condition of listlessness. It is usually due to weari-

ness—nervous derangement, indigestion or hereditary influences. The latter is the more hopeless type.

In such cases there should be wise and persistent efforts to restore normal physical conditions, then follow the directions set forth in this book.

4. The act of voluntary attention is two-fold.

(1) Directive, (2) Inhibitory.

Even in cases where the will is strong and the physical forces in a normal condition, there will be a constant tendency to mind-wandering, resulting from the suggestive nature of the matter with which the attention is being engaged. As previously suggested, the nature of memory is such that recollections are being continually awakened by what is present to the senses and mind in attention.

That is, *voluntary attention* drops into the *involuntary* mood, and the will is *led* in the course of attention, instead of firmly holding control, and directing attention where *it* chooses.

The *Directive force* is engaged in compelling attention along the line of a certain series of impres-

sions as they are made by their corresponding *sense-objects.*

But who has not found that the mind has often been *side*-tracked, and that attention has broken down? *e. g.*, in reading a book attention has been diverted by a suggestion, and although one may have gone on reading mechanically, nothing is remembered of the page.

How to direct attention has already been suggested, and the method will be more fully explained and applied in a later part of this book.

The *inhibitory* power as applied in attention is the act of resisting and keeping back the thoughts that come involuntarily to mind as suggested by the train of Voluntary attention.

It is probably impossible voluntarily not to think. Hence the only successful way to prevent *mind*-wandering is to know how to make the train of voluntary attention fill the whole time occupied without a break.

This will be the more apparent from the fact that mind-wandering always begins after some suggestive perception has been acquired, but before attention

has fully passed on to the next link in the series to be voluntarily perceived.

There is a natural pause after each new perception gained (as in breathing), and this is the point of danger. Pass it safely into the next object of attention, and you are safe until another acquired perception suggests another departure by bringing some interesting *thought*-object vividly into the field of mental vision. Therefore busily and methodically engage the mind with every possible phase of the matter in hand.

It is very suggestive of an effective method of doing this, that the mind-wandering seldom troubles one while attention is engaged with nature, *i. e.*, with sense-objects as they directly impress us through the end-organs of sense. We can study a landscape passing from one part of it to another without a break in attention; so too in listening to music, etc.

Why this is so, is plainly this: that we receive impressions which are usually much stronger, and more vivid than any that can be revived in recollection.

The reader will remember my reference to *thought*

objects, which should not only be clearly revived in voluntary acts of recollection, but also in reading or listening.

What I mean here, I can best explain by using an illustration.

Suppose I have been traveling for the sake of sight-seeing, and after coming home I decide to write a book of travels, and in it fully describe all I saw, experienced, etc.

I begin by representing to mind, not the thoughts I had, but the objects originally present to it, etc., *i. e.*, I mentally repeat my traveling, seeing, hearing, feeling,—all that occurred while actually making the journey.

I begin to write, but however charming my style and language, there is nothing in the printed page that looks at all like that which was present to my mind when writing the book.

What I wish to convey to the mind of the reader of the book is not so many words or sentences, nor thoughts (primarily), but a mental view of my travel, exactly such, if possible, as I had of it—in recollection, as I wrote. And so, to read or listen

with perfect attention, what is being read or heard, should enable one to produce, or re-produce before the mind that which would have been present to it if he had actually been personally concerned, and have afterwards re-produced it in recollection.

It will be seen from the foregoing pages that I hold the theory that we think objectively, and recollect in the same way.

I know that from some quarters this theory will meet with opposition. There is a natural literary pride that causes men to cling very tenaciously to old theories, which have been taught and believed for ages, as being true.

Let him who can have an idea present to mind without its corresponding thought-object being previously and simultaneously present, hold to his old theory of *ideas*, but if this is impossible, then let him be open to a better hypothesis—which in practice will be found a fact.

Early in my study of this subject two remarkable facts arrested my attention.

First. I observed that young children generally

have good memories, and that what is learned in childhood is readily recalled in after years.

Second. That the entirely illiterate, whether civilized or savage, have as a class better memories than the educated.

I have known men who could neither read nor write, who managed quite an extensive business for a whole year, or longer, with no records but those of memory.

Again, an illiterate person, other things being equal, will generally remember more of what he sees and hears than the educated will.

The Cause of this difference, I find in the fact that the one class pays attention, and recollects naturally, while the other does so more or less artificially.

The wise Creator has adapted man to his environment, and that environment is one of objects—*sense-objects*, which impress eye, ear, tactile nerves, taste, smell, etc. Hence the original matter of all attention is composed of sense-objects. But it was not enough that he should be impressed by these, but that he should have the power to recognize them when again present to consciousness. Still more,

to be fully fitted for his wonderful home, and the employments, etc., for which he was designed, he must have the power to make these things present to mind in their relative order of time and place. Otherwise, the moment he left the door of his wigwam, he would be like the Indian, who, when asked if he were lost, replied, "*No*, Indian not lost, wigwam lost."

Thus, he has the power first to perceive objects, etc., as associated, and afterwards to recall them in recollection, in the same order of place and time.

As attention would not be perfect if it did not attend both to the *sense-objects* and their *relations* of *time* and *place*, so recollection would be only partial and imperfect if it did not represent them in the same order. By this I do not mean that a person will have the power to begin at the first and recite parrot-like to the end, but that being started at any point whatever, and by any means that may serve to revive the recollection of any one perception of a given series, he will be able, readily, from that point of view to recall the adjacent perceptions, both preceding and succeeding it. This is a feat that astonishes and perplexes most people, but is accom-

plished with almost equal ease by all, when they understand and practice nature's simple method.

It would be impossible, to most persons, to learn a list of words in this way, without making each one a means of reviving vividly before the mind, the *Thought-Object* corresponding thereto, but *by so doing*, and at the same time *voluntarily* associating them in time or place, if the words or sentences do not imply some special association; in the latter the implied or expressed association must be a matter of attention. To illustrate—suppose you have two words, *patience* and *monument*, in the phrase "patience on a monument;" here the phrase presents a complex object, a statue of Patience and a monument, the former upon the latter.

Now, in the recollective act we will suppose that the monument is recalled; you mentally see it, and as the eye rises towards its top, the statue appears in exactly the same position originally perceived. This law of association of *Sense-Objects* or *Thought-Objects* may be simply illustrated by the following formulæ. Let X, N, Z, be three Sense-Objects presented to mind through one or more of the senses.

Then, attention seizes upon X, and holds it steadily under view until distinctly perceived, then N similarly, then X N together as one complex impression, X at the left hand and N at the right. Now Z is dealt with separately, then as associated with N, *i. e.*, at the right of N, thus N Z.

Now in memory you have three simple impressions, X, N, Z, either of which being revived in recollection will be recognized as a recollection, and not as a creation of imagination. But each of these is a component part of a more extended record in memory, and acts as a stimulus to revive the other part next it; *e. g.*, if Z is present to mind there is a sense of completeness to the right, but of incompleteness to the left, which nothing will satisfy but N, and again X is necessary to complete the record of N.

Let us now suppose that X, N, Z, are not Sense-Objects, properly so called, but signs to represent some other and real Sense-Objects, as follows:

X is the 4th of July, N a white elephant and Z a balloon ascension—both of the latter seen on the 4th of July.

Here, what attention originally laid hold upon were the *4th of July, white elephant* and *balloon ascension.* These I express to a second person by the arbitrary and artificial signs X, N, Z, while there are vividly present to my mind the originals, and in the proper order of time and place.

The person addressed pays little attention to the signs X, N, Z, but has brought into the field of his mental vision the same sense-objects as are present to me, and in the order in which the signs present them.

But in what do X, N, Z differ from so many words or sentences which present to mind three distinct, yet related *Sense-Objects? In nothing whatever.* (See exercises.)

If man were intended for an isolated existence he would need no language nor other means of communicating to another that which is present to his own mind. But his social nature and relations make a means of communication imperatively necessary.

To make my subject the more lucid, I will suppose that the first human pair had no word-language, but had to invent or discover means of expressing their thought.

Suppose that they first used gestures to express pleasure, fear, want, etc., or to tell what they had seen. heard, or felt, somewhat as the deaf-mutes do.

Circumstances would arise such that gestures would not do, the eye could not be impressed by them. Then sounds might be used, at first only to gain the eye, by means of the ear, then the gestures would be made.

Subsequently certain sounds or combinations of sounds would come to express, or convey to the listener certain notions, and back of the notions their corresponding thought-objects.

These sound-signs would gradually become a language, a means of presenting, or re-presenting to the mind *Sense*, or Thought-Objects, without the presence of their corresponding originals.

All unlettered people use language that is highly picturesque and descriptive. The early languages of all nations have been so: take the ancient Hebrew as an example. That language is rich in illustrations and figures of speech, because the people themselves had not departed from nature's method, but

distinctly brought the *Thought-Objects* into the field of mental vision.

For the same reason Jesus Christ used parables.

Why is it that we can easily remember a book or a discourse, that is full of illustrations, but would scarcely remember a single thought, if the illustrations had been absent? The answer is plain, viz: that the illustrations made every thing stand out before the mental vision in an objective way, and in following the descriptions we build up before the mind that which was conveyed by the words; but without the illustrations, we did not so build it up.

In the two cases the nervous, as well as the mental effect was vastly different. In the former they were much as if we had read from nature, instead of from books; in the latter there was the form of words, or their sound, present to the senses, but little more; while the vivid association of objects, remarkably clear in the former case, was lost in the latter, in an effort to associate words and sentences.

My position respecting thinking, and recollecting in Objects finds further confirmation in the earliest attempts at written language.

The earliest of these was by the use of Hieroglyphics, which were at first a somewhat faithful *picture* of the original. After these, ideographs were used, which however had their origin in an attempt to picture the thought or object. The characters employed were called *Cuneiform*, on account of their wedge-like shape.

This primitive picturing denoted either objects or ideas. "Life," for example, was expressed by the picture of a growing flower. A month by placing the numeral XXX. in the circle of the sun, which symbolized the day. But the same picture might denote more than one idea, or object. Thus the circle of the sun represented not only day, but also light and brilliance. And a pair of legs represented the idea of "going," "walking," and "running."

By combining two or more of these ideaographs together fresh ideas might be symbolized to an almost infinite extent. (See *Encyclo. Brit.*, page 120.)

Finally, elementary *sounds* of the human voice came to be represented, as well as things, and later we came to have alphabets representing all the sup-

posed elementary sounds of the spoken languages to which they belonged.

I have made this reference to early written languages to show that the first attempts were to present the *actual objects of thought* more or less faithfully to mind by the use of pictures.

This evidently shows that *ancient man thought in objects*, *i. e.*, he thought either because the sense-object was actually present to mind through the senses, or because it was represented by a sign which enabled him to revive the mental vision of it, or because the *thought-object* had been revived by a simple recollective process. (I use the term mental vision, although the term is not suitable to recollections of sounds, feelings, etc. Mental sense would probably be more appropriate in the latter.)

That the most elaborate and intricate thinking and reasoning is conducted in this way is demonstrable. But of course the rapidity of thought is such that we are not likely to be conscious of the fact unless the mind is specially called to it.

Our methods of study have generally been such that the fall from nature's method into an artificial

one has been gradual and unobserved, but none the less actual and disastrous.

We begin school life by learning letters, syllables, words. Weeks and months are employed in mastering the spelling, pronunciation, etc. Then come sentences, paragraphs, pages, which the pupil by this time supposes are to be learned in the same way. And so he learns to read and *tries to retain the lines in memory.*

I shall have occasion to show that many public speakers have fallen into this blunder, and being unable to memorize the whole of their discourses have resorted to manuscripts, or extensive notes.

All perfect attention must engage itself with the SENSE-OBJECT, or THOUGHT-OBJECT, of which the words are but arbitrary signs.

But this is precisely what most persons *do not do*, whether they are children or adults. How common it is to find people running *rapidly* over the words they wish to memorize, without any effort to realize to mental consciousness the *Thought-Objects* they represent.

This is wrong—a violation of nature's method, and weakening to the natural powers.

Objects are the basis of all knowledge, and the nervous organism, represented by the special senses, is the physical basis of all mental operations.

The *sense-object* stimulates nervous action, and the mind interprets the action. Hence the recollection must be a representation to mind of that which was the stimulating cause.

But if the stimulus is only a series of sounds, or written word-signs, the labor of learning must be great and the recollection a matter of much difficulty. *Perception* follows the course of *attention*, and like it, is limited to a small area. It must be a perception of particulars. General perception is an impossibility. The objects of perception are the same as those of attention, while with the relations, qualities, etc., it is even more concerned. You see an object, you *perceive* its qualities, relations, etc. You hear a sound or series of sounds, and you *perceive* their volume, pitch, harmony, etc.

You feel a pain, you *perceive* its *nature*, *locality*, *cause*, etc. An acquired perception is an acquired

power to reproduce before the mind the same notions, thoughts, objects, relations, etc., as those formerly made present by the presence and stimulus of the original *sense*-Object, through the end-organs of sense.

To perception we may add what is called *ap-perception*, which is a turning of attention and perception inward, upon the nature of our acquired perceptions. It is a perception of our perceptions, and in the acquisition of knowledge, enables one to determine whether or not he really knows, and is able to reproduce in mind that which he originally perceived.

CHAPTER IV.

Reciprocal Predication.

THE subject of the following chapter is of vital importance in the recollective process.

The term *Reciprocal Predication* may be new to the reader, but is the best term I could find to convey to the mind what I mean thereby.

The old philosophers have said a great deal about the association of ideas, and have contended that recollection was accomplished by the (so-called) laws of association and representation.

I think the reader will agree with me in taking the position that memory proper is not an unconscious retention of ideas in the mind, that when we cease to consciously think a thought it no longer has any place in mind. Hence recollection by a law of association of ideas is impossible, there being none

in mind to associate together, or to be represented by one another.

I have elsewhere shown that *memory* is the retention by the nerve-particles of an acquired mode of behavior.

This is an effect of which a *sense-object* was the original cause.

But these *sense-objects* were associated in time, or place, and their *association* or *relation* was also a matter of *attention* and *perception.*

The original cause was therefore an association of causes, a complex cause, composed of several simple ones, whose separate impressions joined one another, so to say.

Hence the acquired mode of behavior of the nerve-particles was an association of nerve-commotions, following one another in close connection. It is a habit of nervous action—a kind of Calisthenics in which the last act is a point of starting for the succeeding one. Or in a word, all the nerve-particles originally concerned in a series of perceptions have the power to stimulate one another to a repetition of their former associate mode of behavior, and thus

there is brought to mental consciousness and perception the very same nerve-commotion (only less strong) that resulted in the original perception. But that perception was one of various *sense-objects* in a certain relation to one another.

Hence, for all the practical purposes of *memory* and *recollection*, it is admissable to say that Recollection is a *re-perception* of the original sense-objects—without their action again, upon the end-organs of sense. And each one of these has the effect of *suggesting* or *predicating* the one next in order. To illustrate: You have learned that Abraham Lincoln and Jefferson Davis sustained certain relations to one another and to the late war. Either of these has power to predicate the other—Lincoln in this group predicates Davis his opponent, or the war which occurred during his presidency—so too of Davis, or the war.

Or you may recall some familiar place of childhood—you seem to be there and see it—and all about you are the old associate scenes—not all together but one after another comes into the field of mental vision, and you find that each object has the effect of

reviving some other adjacent to it—whether similar or otherwise.

Another phase of the same thing is found in the fact that sounds, words, feelings, objects, odors, tastes. etc., having some feature or element in common will predicate one another.

But sense-objects that reciprocally predicate one another must both have become records of memory. At least the predicated one *must*. A common experience of this kind is found in similar names. Saturn, may predicate *Satan*. *Dover*, may predicate *Andover*.

A new acqaintance may remind you of an old acquaintance, because they have some feature, or manner, or voice peculiarity in common. Or having met two persons together at some time, when again one of them is met, almost the first question you ask is, "How is our mutual friend?" etc.

Now, underlying all this reciprocal predication is the fact that nervous activities are begun, which were present when the sense-objects of your present recollections were actually present, and that which first

comes to mind is not a thought or idea, but a flash, so to say, of the original object.

This sometimes leads to ridiculous blunders of expression. Here is an illustration: You intend to ask a caller to lay his hat on the table, but say, to your own annoyance, and his amusement, "Lay your table on the hat, please."

This kind of blunder will sometimes occur, when the first words spoken have been associated in memory with both the terms that you have transposed. Thus in the above sentence you may often have heard the terms "*lay your hat down*," and "*lay the table;*" so in the blunder referred to, the revival of the record of *lay* has stimulated the revival of both *hat* and *table*, but the latter most distinctly, *i. e.*, it first arose distinctly into the field of mental consciousness, and so was first mentioned. The above and similar occurrences, indicate two things—The law of Reciprocal-Predication, and that it has a physical basis.

A great deal might be written, and many phenomena of recollection presented, confirmatory of the fact of this law of Reciprocal-Predication, but

I forbear, as my purpose is not to present an exhaustive treatise of a theoretical character, but presently to engage the student with the purely practical side of the subject.

I shall now content myself with a brief statement of some of those cases in which the law of Reciprocal-Predication applies.

1. All sight-objects that have been perceived as grouped together in place or time, whether similar or unlike.

(The same is true in regard to the other special senses).

2. All sense-objects (*i. e.*, of sight, hearing, taste, etc.,) perceived as associated in the same time or place.

3. Those having some feature in common but otherwise different, both as to themselves, and time or place.

4. Extremes, as light and darkness, vice and virtue, high and low, etc.

The recollective act is in this regard like a pendulum—starting at one extreme it swings to the other.

This is always the case when the notion revived in recollection is relative, as beauty, deformity. We judge of the one by comparison with the other.

It is exceedingly important to understand this law, and to bear it in mind, or rather work in harmony with it, when first paying attention, because it is by this law that your original perceptions are to be brought back in recollection.

That one's power to recollect depends upon the "frequency of repetition" is not wholly true.

I admit that readiness, or speed in speaking, is acquired by it, but to fully know a book, for instance, or a series of objects, etc, requires but that we fully perceive the Sense-Objects presented and their connecting relation, so that each is inseparably fixed with its associates immediately next, before and after.

While this law is of paramount importance to a good recollection, it is also the cause of mind-wandering, so common when we are trying to acquire some new perceptions. The new matter predicates the old already stored in memory.

(See Attention.)

But for the law of Reciprocal Predication we should never be able to learn, or use a language, nor call things, persons or places by their names.

The misapplication of the law in learning a language makes it almost impossible to converse in it even after one can read and translate correctly.

This indeed is the only reason why some find it difficult to learn languages. I will more fully treat this subject under "How to learn a language."

CHAPTER V.

The Missing Link Discovered.

MOST persons find it comparatively easy to remember detatched statements—verbal or written, whether in prose or poetry. But almost universally there is difficulty in recalling what came next in order, and so reciters have had to employ prompters--and speakers, notes.

They realize that there is a *missing link*, a break in the chain, even when the subject is the same, and the author glides easily out of one expression into another. There comes a feeling of blankness, distressing in the extreme.

What, then, is this Missing Link?

I. It is the mind's perception of its own transition from one point of view to another, during the process of attention and perception, as

1. Direction in time. Thus we may note that a certain event took place before or after the *Wars of the Roses.* Then, in recollection the mind looks forward or backward from that point or event. The *direction* became a record in memory connecting "Wars of the Roses" and the other event, and as in recollection there is an exact repetition, in the nervous and mental functions concerned, of that which took place during the original process of attention and perception, this record of direction makes the chain continuous, and a blank in recollection becomes impossible, unless, of course, from nervous derangement, in which there can be no absolute certainty.

All recollection refers to past time; ordinarily we recall particulars of the past by making great leaps, and touching only a few points until we reach the time desired, when the events belonging thereto come up as formerly fixed in memory by the process of attention.

A *point* in *time* is treated very much as if it were a *point* in *space.* It becomes to the mind a locality very much as the home of one's childhood or any other familiar spot does, and the events, etc., asso-

ciated with, or belonging to it, bear relations to it similar to those belonging to familiar localities. Hence we may speak very properly of *Direction* in time of one event from another, and so doing we satisfy what may be called a strong mental instinct—the tendency to cast about one, from certain standpoints of time, as if one expected actually to see the events grouped around in certain directions from the point of view, and in some fixed position in respect to one another.

2. Direction in space.

This will probably be clearer to the reader than the former, as it has frequent illustrations in everyday life, *i. e.*, in so far as the principle has been observed at all.

If you undertake to recall the notable places you have visited, you will probably discover that so far as you do it successfully, you seem to take direction from one point to another. An illustration will probably make my meaning clearer to the reader than anything else can. Try the following: Select fifty names of cities, places, rivers, mountains, or any other objects whose locality you know. Mention the

first name, then note the direction you take in passing to the next place mentioned in your list, then speak the name, go in the same way through the whole list *only once*. Then go over them from memory again taking the direction as when you first read the names. Begin either at the first, last. or any other word in the list, and you will recite every word with ease.

Here, by the way, is a good illustration of the fact that the true ultimate object of attention and recollection is an *object really* instead of its name, the latter being only a sign.

If I mention the name Chicago—I name a city belonging to a certain locality. The mind lays hold of the locality, then names it, then passes to another locality, etc. But a part of the original process is the passage, or transition from one point to another.

3. Like and unlike.

The process of thought in passing from one word or sentence to another, whether *similar* or *dissimilar* in meaning, is quite similar to that under Nos. 1 and 2.

Opposites, as *light* and *darkness—virtue* and *vice*,

are the utmost extremes, the one at this extreme swing of the pendulum—the other at that.

The student will readily perceive that this is so when he comes to practice my directions and exercises.

Attention given to the *Missing Link* will prevent mind-wandering—and will insure recollection when desired.

It is a kind of natural bridge over what would otherwise be a mental chasm, or an unknown wilderness. It is no part of any two associated objects of memory, and yet it is united with both, thus making them one whole.

This Link, unlike the tricks and devices employed by Mnemotechnists, is natural, and is found *among* the objects to be remembered, not *imported* from elsewhere.

The following pages are given to various exercises, intended to illustrate the principles referred to in the foregoing pages.

It will matter little whether the student has fully grasped my meaning thus far or not, if he will but

follow the directions and do the exercises given or suggested in the remaining pages of this book.

His mind will readily adopt the method—for, in reality it is true to every principle and law of the mind which acts normally.

CHAPTER VI.

Exercises.

BEFORE beginning the following exercises it would be well for the student to try to memorize a long list of, say, fifty words, by his old method. After doing this, let him do each of the following exercises, and devise similar ones for himself.

1. Lay twenty-five to one hundred articles on a table, without paying any particular attention to them. After this is done, begin at some point on the table, and observe the article *nearest* or *at* that point, as the case may be, then speak its name, if you know it; if not, note the fact. Then take the next in order—notice its direction from and relation to the first article noticed. This has the effect of producing in memory a complex record composed of

the two objects and their relation to one another. Now take the third, or next to the second in a similar way, observing the relation of the third to the second, but paying no more attention whatever to first.

In this way go through the whole group of objects, after which turn your face in the opposite direction from them, and beginning at the starting point on the table, mentally see and then name each one in the order in which you observed it.

Now begin at the last and retrace your course until you reach the first.

You will be able to recite the articles in this way after once going over them as I have suggested, and if so disposed you can awaken a great curiosity and gain the reputation of having a wonderful memory by doing similar exercises in the presence of friends, asking them also to try. They may remember ten to twenty, possibly, but you can remember almost any number after a little practice.

Do not give your secret away, but keep it and use it.

2. Take a landscape or picture containing a

large number of objects, and begin at some point and take the objects as you did in Exercise 1. Then mention them from memory—beginning with the last—mentally looking at the place where it is located, and at *it*, then the next, and so on until you have mentally seen and then named each one in order.

You will find a great deal of amusement and profit in studying every picture and landscape you see in this way.

If you would puzzle and astonish your friends, study some of their pictures of landscapes, or other scenery or objects, then ask them to describe the picture from memory, yourself perhaps asking questions that will be likely to represent before the mind visions that are not in the picture at all. *e. g.*, A friend of mine did this in the house of one of his friends after having learned my method. A square picture hung on the wall. He asked them to describe it. First the frame; was it round or *oval?* They thought it was *oval*—more oval than round. Now about the picture; were there any *trees* in it? They thought so. Where, etc.? So he went through

a series of questions, and every answer given was incorrect.

If you are an artist, or studying art, you will find this series of lessons will wonderfully develop your powers to reproduce from memory and to observe the smallest detail and in the right place.

The object of the lesson is to cultivate the natural power of vividly representing (or picturing, if you prefer the term) the objects of previous perceptions before the mind.

3. Take now a long list of words; we will begin with names of concrete things. Bear in mind that these words are only written signs, or if spoken, sound signs, of the things they name. You must therefore revive the mental image, or *Thought-Object* clearly before the mind.

You must also have these *Thought*-Objects presented in some relation to one another, if you would memorize in one reading.

I will try to illustrate the method clearly in the following exercise:

Mountain; *a great hill, mentally see it.*

Tree; *see a tree, perhaps on mountain side.*

Cow; *see her, perhaps under a tree.*

Wagon; *see it passing between you and cow.*

Eagle; *see it flying over wagon.*

Book; *beside you on table as you look at eagle, etc.*

Dog; *under table.*

Hat; *lying beside dog.*

Surplice; *in the hat.*

Steamboat; *on which you now see the hat and surplice.*

Brooch; *on deck, you see it lying there.*

Shore; *seen from bow of boat.*

Stars; *arrest attention as you look landward.*

Steeple; *rises against the sky as you look.*

Pavement; *at base of steeple, you see it.*

Goat; *up in the belfry.*

Cart; *hitched to goat; may be in street.*

Pencil; *back of goat's ears.*

Esquimaux; *using same pencil.*

Iceberg; *ice mountain rises in vicinity of Esquimaux.*

Canoe; *at base of iceberg.*

Garden; *on shore.*

Mansion; *in garden.*

Bicycle; *leaning against mansion.*

Maiden; *sitting near bicycle.*

Now close the book, and recall the last object, the *maiden* seated just as you had her placed in first going through the list of words. Make no attempt to recall the word, but only try to revive the representation of the girl herself—when you have accomplished this, speak the word or name.

Now, mentally look in the direction of the next object, and you will instantly revive the image of the bicycle--then name it. Now, what next to bicycle? That against which it leans--mansion, etc.

Go thus through the whole list. Then take it in the opposite order. Now start at some central point and go either way--thus take Brooch as the point of starting. What next before it? *Steam-boat*, on whose deck you saw it. What after it? *Shore*, for, as you stood on deck when you saw the Brooch, you looked off upon the shore.

Go thus through the list as your own mind may dictate, and you will be delighted to find that you can recall every word, and in any order, after only one reading.

Make occasional lists for yourself, as a pastime, and learn in the same way.

You will find it almost equally easy to learn foreign words in this way, and when learned you will use them as readily as your mother tongue, so far as the meaning is concerned. Of course you may find a little difficulty with the pronunciation, but even this will be quickly overcome.

Be careful to observe the exact form of the words as to spelling, syllables, etc. Notice, also, how the sounds are formed by the linguistic organs.

When learning a foreign vocabulary, or indeed any new word even of your own language, always get the definition first, and from it revive before the mind the *Thought-Object*. When this is satisfactorily accomplished, turn attention upon the foreign word, and speak it. Now, fix the mental vision upon the object and speak its foreign name, but do not again refer to the definition of the word--because the object is the only definition you need. The following example will illustrate my meaning and the value of the method.

Take the German word *Baum*. If you do not understand German, this word means nothing to you, but if I point at a tree and say the German name is

Baum, you instantly understand the word. It is in this way that the English word *tree* was learned.

Vocabularies are mostly learned from books—the foreign word followed by the English definition; and so you would have it thus—*Baum, a tree.* Now, by the law of *Reciprocal-Predication*, Objects that are perceived in immediate association of place or time, predicate one another. Hence these two words *Baum*, and *tree*, which are in themselves two objects of sight, irrespective of their meaning, and the tendency is to recall the other whenever one of these words is present to mind, so the student has to translate into his own language to get the meaning. This accounts for the strange fact that most persons can translate correctly long before they can speak the language.

To a student who blunders into this false but very common method, *Baum* (the word) means *tree* (the word), which is not at all true; but *baum* means the *same object* as *tree* does, just as *fox* and *reynard* mean the same animal; and so either word should enable the student directly to revive the appearance of the object.

In learning the following or any list of foreign,

or other words, be careful to revive the Thought-Object, then speak the corresponding word.

I have put the definitions first as they should always be placed, that you may get the Object clearly presented to mind before attention becomes at all engaged with the foreign word. If possible, never refer to the definition a second time, but engage yourself only with the Objects and the corresponding foreign words.

The following is a list of German words, and definitions:

Horse..... .....(see him).....Pferde.
Eye.....(see eye of horse).....Auge.
Face.....(in which eye is set).....Gesicht.
Head..... (belonging to above face).....Haupt.
Leg.....(of same animal).....Bein.
Leaf.....(on ground by leg).....Blatt.
Street..... (in which the leaf lies).....Strasse.
Mansion.....(across the street) ....Wohn-haus.
Window.....(one in mansion).....Fenster.
Room.....(Just inside the window)....Zimmer.
Boy.....(in the room).....Knaben.
Money.....(boy counting it).....Geld.

Coat..... (worn by the boy) ..... Rock.
Chair..... (under coat)..... Stuhl.
Stove..... (near the chair) ..... Oven.
Picture..... (on wall beyond stove)..... Bildniss.
Woman..... (sitting below picture)..... Frau.
Dog..... (by woman's side)..... Hund.

Now, if you have got the objects properly associated, you can pass them before the mind without mentioning any word. Run over the list in this way forward and backward. Then begin either with the first, or last object of the list, as you may fancy, then speak the German name, then take the next object, and so on to the end.

Be careful not to allow yourself to try to recall the word before the corresponding Object is clearly before the mind.

Be careful also not to allow yourself to think or speak the corresponding English word, in connection with the foreign word, under any circumstances. If, for any reason, it becomes necessary to use corresponding words of different languages in close connection with one another, always make the corresponding *Thought-Object* intervene; *e. g.*, if you wish

verbally to explain a foreign word, first revive the *Thought-Object* before the mind—then call it by the corresponding English name. This method may appear at first thought to be cumbersome, and *round about*, but it is really the direct, and shortest road to the best results. It is, indeed, the only way to make the wonderful law of Reciprocal-Predication perfectly serve the purposes of Recollection.

The principles employed in learning, and recollecting words are also applicable to figures. But it must be borne in mind that figures, for the most part, are to be treated simply as objects without any reference to how many individual things they indicate. In the Arabic notation the signs are entirely arbitrary, and bear no resemblance to that which they indicate, 1. perhaps excepted. In the Roman notation there is some suggestion of the number meant, by the character used, thus, III means three, V, five, then IV, four, VI, six, etc.

To learn a long series of Arabic numerals, treat them just as you would as many toys, or other objects, arranged in a line; *i. e.*, observe the first character, then the one next it, then take these two together,

etc. Thus, in the number 897,654, you have first 8, the S-like figure, then 9, a cipher head with a tail; now you have 89; next is 7, one with a straight head to left; now you have 97, two figures with heads; now 6, etc., to end. Learn the following numbers, in this way, by one reading. Then recite forward and backward.

You have probably observed that you have always been able to easily remember the first of a series, but could not clearly recall the following ones. This is due to the fact that attention is generally fully fixed upon the first character, but as soon as you begin to take up the following figures, attention is dissipated by seeing dimly several figures at a time, which is similar, in its effect, upon the recording property of the nerves engaged therewith, to that produced upon vision by writing a dozen characters on the same half inch of paper, and upon one another.

But the method just described enables the student to confine attention to the character desired, and to so connect it, in a combined record, with the preceding one, that recollection becomes a certainty.

Carefully learn the following exercises by this method, taking half of them at one reading.

(1) 7 2 4 3 8 9 5 6 2 0 4 3 5 8 2 4.

(2) 7 A 9 0 X W. 4 B 5 N 1 3 R+4—1+3.

The following diagram represents a Chess Board with the squares numbered, and the numbers following it indicate the moves of the knight, beginning with any square, and by the ordinary way of moving, placing him once in every square, and finally ending where you began.

CHESS BOARD.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64

This is supposed to be quite a feat of memory, but it is very easy and simple, as you will see.

The figures indicate the moves, from square No. 1, back to 1 again, but you will see that having learned the moves in this order you can begin at any one of the numbers, and move either in the forward or backward order.

The moves of the knight from 1, placing him once in every square on the board and ending at 1, are the following:

1,	11,	5,	15,	32,	47,	64,	54,
60,	50,	35,	41,	26,	9,	3,	13,
7,	24,	39,	56,	62,	45,	30,	20,
37,	22,	28,	38,	21,	36,	19,	25,
10,	4,	14,	8,	23,	40,	55,	61,
51,	57,	42,	59,	53,	63,	48,	31,
16,	6,	12,	2,	17,	34,	49,	43,
58,	52,	46,	29,	44,	27,	33,	18,—1.

You will find this easy to learn, and can use it to surprise your friends.

The following may also be used, as an exercise. It represents the ratio of the circumference to the

diameter of a circle carrried out to two hundred places.

3.14159265358979323840264338327950288419716939937510582076494459230781640628620899862803482534211706798214808651328230664709384460955058223172535940812848111745028410270193852110555904462294895493038+.

Make occasional exercises for yourself or get your friends to do so; then have a contest with them in learning the figures. Do not give away the secret, and you can have lots of fun of this kind.

It is important to have a good recollection of numbers as they are so frequently used. In book-keeping it is very important to be able to remember the pages on which certain accounts are written, without having to look at the index book, and this you can do by my method.

It also enables one to remember the page of a book; number of hymn; chapter of Bible; text, etc., with ease.

The above method might be employed with success in remembering dates, but as a date means a definite point in time, it is better to remember the

point according to the *Time Measure* given elsewhere, and then name it by giving the appropriate figures.

The student will readily see that all kinds of signs and formulæ can be learned in the manner described herein.

CHAPTER VII.

Dates.

HOW to remember dates is worthy of some special attention in a work of this kind. Most students of history find it difficult to remember dates, and have resorted to all sorts of devices to aid the memory in retaining and Recollection in reproducing them. Mnemotechnists have expended all their arts and trickery to this end, but with little or no real benefit to those using their schemes.

It is very evident to me that they have failed to grasp the real import and use of a date, and until we understand their true import no device can be of much service. Most students of history hitch the date on to the end of a sentence and try to fix the number in memory simply as a number, and so the

mind and basis of memory (the nervous system) are not impressed with what we may call the Sense-Object, or Thought-Object represented by the date.

What is a date? It is a number composed of one or more numerals, and indicating a particular year before or after some other one which is taken as a starting point of the numeration, as the supposed date of creation, and the birth of Christ,—or, in a word, a date directs the mind to a definite point in Time. But if a *point in time* can be represented by a date or any other means, then *Time* itself should be represented in some way to the mind, and also to sight.

If a date is a point—time as a whole is length, and such is the general conception of it. We say "A long time—a short time." So long before or after a given date.

Elsewhere will be found my Time Measure, which represents twenty centuries following the Birth of Christ. Each section of the measure represents 1,000 years. The central point of each represents 500 years. I have drawn a perpendicular line through them to assist the eye. Then the

hundred-year points have lines reaching entirely across the measure. The fifty-year points have lines extending a little below the central horizontal line, and the ten-year points in each century are indicated by shorter lines.

This is sufficiently minute for all ordinary purposes.

Study the measure a little until you can readily represent it before the mind in recollection, *i. e.* until you can mentally see the two 1,000-year measures; also their central points, and the century points.

This device will be found very satisfying to the mind, being in harmony with the notion of *length* and enabling the student of history to refer to a definite point whenever a date is presented to sight and mind. Thus the date of the *Dark Ages*, A. D. 476, means a point on the *Time Measure* just a little before the 500-year point, or in the 5th century and 3d decade after the 50-year point,

Again, the Dark Ages ended A. D. 1076, or at the same point in the 11th century, *i. e.* in the first century space of the second thousand-year measure.

The discovery of America by Columbus *A. D.*

1492, in the space just after the 15th century point and in the last decade.

Now if asked one of these dates, you will recall the particular point in time of the event, and will then express it by the corresponding numerals.

What is the date of the beginning of the Dark Ages? Let the mental eye fall upon the point in your measure where they began, and you see that it is A. D. 476. You will pursue the same method with all dates.

Another advantage in the use of the Time Measure will be found in the study of contemporaneous history.

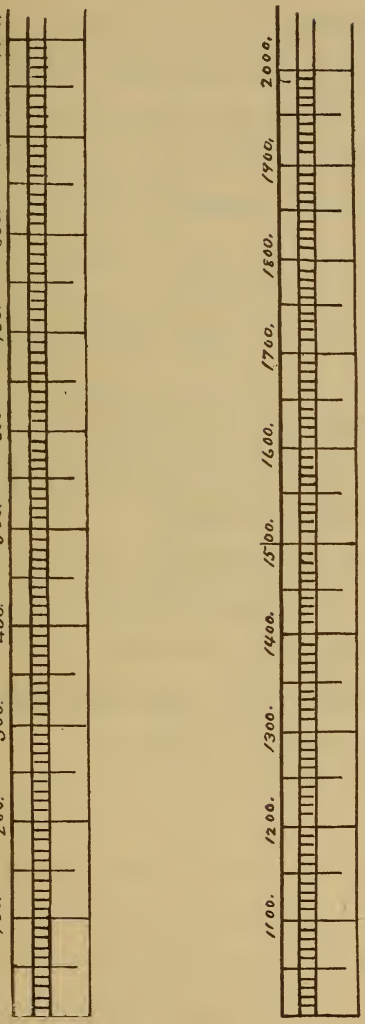
It will be presented to mind as lying between two extreme points. All the dates will therefore lie between these extremes. Thus the study of French and German history, for the same space of time, would engage the mind with date points all lying in the same section of the *Time Measure*.

Again, the relative position of dates more or less remote from one another will be instantly grasped.

I need not multiply words respecting the utility

TIME MEASURE.

A. D. 1 TO A. D. 2000.



and naturalness of the *Time Chart.* The intelligent reader will readily understand and use it.

I have given only a measure for Time subsequent to the Birth of Christ, but the student can readily make a similar measure for himself to be used for dates prior to the *Birth* of Christ. Or, indeed, he need not even make such a measure on paper, as he will find after using the one given in this book for a while, but can mentally perceive the whole 4,000 years thrown into four sections, like the two given herein, then he can number either from creation or from the Birth of Christ.

I submit the *Time Measure* with the confidence that others will find in its use as much pleasure and profit as I have done.

Elsewhere I give suggestions regarding how to fix *facts* of history in memory.

CHAPTER VIII.

Memoranda, etc.

WHO has not had difficulty in remembering items of business, errands, etc? The slip of paper containing the items is almost universally employed, and even then how frequently does a "devoted husband," for instance, slip his memo. into his vest pocket, and never think of it again until his wife asks him if he brought the beefsteak, etc. "O, my poor memory!" Poor nonsense! His memory did not contain the business at any time, first or last. He simply heard his wife speak certain words, then perhaps he wrote them; then to more utterly rob memory of anything that it might hold, and revive in recollection, he stuck the slip in his pocket, hoping to remember it.

Now I shall show that he has violated even the

simplest law respecting memory. That which he was to remember was a matter of business, *i. e.* the doing of some business; but he turned attention from it, to the words on paper, and the paper placed in his pocket.

Let us analyze this matter of business. Suppose it is to go to Jones', on leaving his office and get a pound of tea, to Brown's for a beefsteak, and to White's for a spool of silk. Observe: This business is to begin just as he leaves the office; from the office door he goes in a certain direction to Jones', where he asks for, and sees put up, a pound of tea. Thence he goes to Brown's, orders and sees beefsteak put up, and so with the next item.

Now, as these are the things to take place when he recollects and does the business, how can he so fix the matter in memory that there will be certainty of recollection? If it is true (and it is) that recollection is an exact repetition before the mind of what took place when attention was first engaged with the matter in question, it is therefore plain that in receiving the orders at home in the morning, you must mentally do the business; *i. e.*, as one item

after another is mentioned, you mentally attend to it with the lightning speed peculiar to thought, beginning at the point of departure from your office, or whatever you may be last doing, or going to do before going home.

All kinds of business or other items can be fixed in memory in this way, then entirely dismissed from mind; but when the moment in the day's proceedings arrives, or you reach the place where they should be attended to, they will come to mind like a flash. An illustration of this was given me by one of my pupils, as follows: he was to bring a certain paper with him to the class in the evening, but had left it at the office, which he had to pass in coming to the class. He had fixed it in mind as above described by mentally going into the office as he passed, opening his desk and getting it. On his way to class he went into the office involuntarily and opened his desk before he realized what he had done, then took up the paper desired. Thus he had involuntarily exactly repeated what he had previously done mentally in fixing it in memory.

The necessity of fixing matters of business, etc.,

in memory in this way, and the certainty of recollection, depend upon the fact that memory has a physical basis in the nerves, and that the nerve particles of the special senses concerned, must be made to act appropriately, so as to acquire the proper modification, or adjustment, or mode of behavior, which when again stimulated to revival will cause the whole series of *Thought-Objects* to become vividly present to mind.

And this is accomplished by the mental process above described, *i. e.*, the process of mentally seeing the whole matter done and in its proper connection.

I have probably said enough to enable the intelligent reader to apply the method. Try it, and by degrees test the method by the severest trials, and you will be convinced of its naturalness and effectiveness.

You will dispense with the everlasting memo. and be proud of your reliable memory.

CHAPTER IX.

Listening, Reading, Recitation.

TO students and the professions, and to all who wish to be well informed, and to be able to have their knowledge at ready command, this chapter will be of great importance, not that they cannot succeed without it, but that they will do better with it; not that they cannot learn without it, but that they will become more learned with it. They will know better and know more of all that they engage Attention with, according to the following instructions.

A desire for brevity forbids the writing of much that might be said, or the use of extended exercises and examples. I shall aim at giving only enough to insure a clear comprehension of the subject, know-

ing that the best exercises will be found in the subjects which ordinarily engage the mind.

How to Listen or Read.

There are two ways of listening. The more common is that of following the words of the speaker, simply as words without any accompanying effort to present before the mind that which is being spoken about.

The other, and less common method, yet more effectual, because it meets the needs of our perceptive faculties, is to treat the words simply as arbitrary signs for things not present to the outer senses, but by a natural process, presentable to inner sense. In other words, it is a process of constructing or picturing before the mind of that which is indicated by the words.

The latter is the only method of either listening or reading that fully supplies the material for memory. This process of making the different features of the subject objective to mind makes them also *tangible* to the faculty of memory (considered as a nervous mechanism). It requires a nerve-commo-

tion, an adjustment of nerve particles of the special sense concerned, such that an aptitude to repeat the same is acquired, so that when the recollective process is about to begin, and the will seems to search for a re-perception of the original object through the corresponding, or, more properly, the correlated special sense, a stimulation takes place which results in its representation to mind; and this as a matter of knowledge is not a recall of the words in which the *Thought*-Object was originally presented to mind, but a re-perception of the thought-object itself.

A sentence is only an extended word, a *sense-word*, so to speak, which presents not only a sense-object, but also its peculiarities, relations, qualities, etc., each of which is in itself a sense- or thought-object. Thus in the sentence—The apple I hold in my hand is sweet. *Apple*, *I hold apple in my hand*, and *sweet*, are all word-signs of sense-objects. You mentally see the apple. You see me holding it—in hand—*i*, *e.*, the apple is so related to my hand.

The sense of taste finds an object in the sweetness of the apple. You determine what sweetness is by taste, a kind of mental taste, and yet it results

from nervous action, as indicated by the well-known fact that in the recollection of very delicious or disagreeable tastes there is a decided sensation in the mouth—the "*mouth waters.*"

Carefully follow instructions in doing the following exercises.

BARBARA FRIETCHIE.

(J. G. WHITTIER.)

Up from the meadows rich with corn,
Clear on the cool September morn,
The clustered spires of Frederick stand,
Green-walled by the hills of Maryland.

Get the imagery as you proceed, also its association. As I read these lines I seem to see the low lands covered with rich waving corn, from which the ground rises in a gradual ascent; the time is a September morn, bright and clear. As I look up the ascent, I see the clustered spires of the city, and just back of them the green hills rising like a wall.

Now, after this first reading I can recall the scene without the aid of book—cornfields in the low lands—the ascent and appearance of the morning—the spires and the mountain wall behind them. Now, to master the author's words, I recall the first

Thought-Object—the meadows covered with corn; *i, e.*, I mentally look down in that direction, and mentally see them; then I get the words of the book by reading them with this picture before the mind. Then state the next *Thought-Object* in a similar way. The *ascent* and kind of morning—then the words "*Clear on the cool*," etc. I now look along up the ascent and see the spires, and read "The clustering spires," etc. Then the mountains are seen back of spires, and I read "Green-walled," etc.

Now, let the student recite these four lines, beginning with the last. First recall the vision of the hills back of spires, now give the words "*Green*," etc. Now the Thought-Object next to the hills. Now speak the words, "The clustered spires," etc. Now the next part of the scene, and so to the beginning; pursue the same method also from first to last.

Now take the next stanza in a similar manner, and so to the end. You must be careful not to break the connection or association of the stanzas.

The second verse begins, "Round about them orchards sweep." Your last object was the green

hills, from which your eye must drop at once upon the orchards all about them. This connects the parts of the scene and makes recollection a certainty by the law of *reciprocal predication.*

Learn the remaining stanzas as the first, and all the other exercises. whether poetry or prose.

Round about them orchards sweep,
Apple and peach tree fruited deep,
Fair as the garden of the Lord,
To the eyes of that famished rebel horde
On the pleasant morn of that early fall,
When Lee marched over the mountain wall,
Over the mountain winding down,
Horse and foot into Fredericktown.

Forty flags with their silver stars,
Forty flags with their crimson bars,
Flapped in the morning wind; the sun
Of noon looked down and saw not one.

(Pulled down by the inhabitants when they saw the army approaching.)

Up rose old Barbara Frietchie then,
Bowed with her four score years and ten,
Bravest of all in Fredericktown—
She took up the flag that the men hauled down,

In her attic window the staff she set,
To show that one heart was loyal yet.
Up the street came the rebel tread,
Stonewall Jackson riding ahead.

Under his slouched hat, left and right
He glanced,—the old flag met his sight.
"Halt!" The dust-brown ranks stood fast,
"Fire!" Out blazed the rifle blast.

It shivered the window pane and sash,
It rent the banner with seam and gash.
Quick as it fell from the broken staff,
Dame Barbara snatched the silken scarf,
She leaned far out on the window sill
And shook it forth with a royal will,
"Shoot, if you must, this old gray head,
But spare your Country's flag," she said.

A shade of sadness, a blush of shame,
Over the face of the leader came;
The nobler nature within him stirred
To life at that woman's deed and word.
"Who touches a hair of yon gray head
Dies like a dog! March on!" he said.
All day long through Frederick street
Sounded the tread of marching feet,

All day long that free flag tossed
Over the head of the rebel host.
Ever its torn folds rose and fell
On the loyal winds that loved it well;
And through the hill gaps sunset light
Shone over it with a warm good-night.
Barbara Frietchie's work is o'er,
And the rebel rides on his raids no more.

Honor to her! and let a tear
Fall for her sake on Stonewall's bier.
Over Barbara Frietchie's grave,
Flag of freedom and Union, wave!
Peace and order and beauty draw
Round thy symbol of light and law;
And ever the stars above look down
On thy stars below in Fredericktown.

The following is very easy if the student will but make it objective to the mind. The objects are in contrast throughout.

Cleon and I.

By Chas. McKay.

Cleon hath a million acres, ne'er a one have I;
Cleon dwelleth in a palace, in a cottage I;
Cleon hath a dozen fortunes, not a penny I;
But the poorer of the twain is Cleon, and not I;
Cleon, true, possesseth acres, but the landscape I;
Half the charms to me it yieldeth, money cannot buy;
Cleon harbors sloth and dullness, freshening vigor, I.
He in velvet, I in fustian, richer man am I.
Cleon is a slave to grandeur, free as thought am I;
Cleon fees a score of doctors, need of none have I.
Wealth surrounded, care environed, Cleon fears to die;
Death may come, he'll find me ready, happier man am I;
Cleon sees no charms in nature, in a daisy I;
Cleon hears no anthem ringing in the sea and sky;

Nature sings to me forever, earnest listener I;
State for state, with all attendants, who would change? Not I.

Now kindly recite backwards and forwards.

Apply this method of learning to both poetry and prose, whether you read it or hear it spoken, and the results will be beyond your anticipations.

These exercises are simple and easy. I have selected them because they are so.

Drill yourself for a while with such exercises as are vivid and easily pictured, then you can pass on to that which is more difficult.

The following will be a pleasant exercise:

Memory Bells.

"Memory Bells are ringing—ringing
In the distance far away;
Do you hear them singing—singing?
Do you hear their silver chiming?
Do you hear their mellow rhyming?
Do you hear the dear sweet story
Of your childhood's far-off glory?
Do they take you back to years
Clouded by no haunting fears?
Do they speak of sunny hours
When your path was strewn with flowers?
When a rainbow arched the sky

And when Faith stood smiling by?
They are tolling—tolling slowly,
Hear the echoes die away,
Tender, lowly, sad and holy,
Will you tell me what they say?
Do they tell of manhood's dreaming?
Do they tell of bright eyes beaming?
Do they tell of fond words spoken?
Do they tell of young hearts broken?
Do they tell of hopes you cherished?
Do they tell how faith has perished?
Do they tell how night and day
Cruel Hate has tracked her prey?
Do they tell of proud hopes blasted,
And of life's sweet treasures wasted?
Memory bells are pealing—pealing,
O'er the ruins by the way,
Through the mind's dim chamber stealing—
Will you tell me what they say?
How your heart lost all its lightness?
How your life lost all its brightness?
Has your day-star set in gloom?
Do you hear the voice of Doom
Mocking every groan that bursts
From the aching heart that thirsts,
For the love it ne'er may share
And the joys it ne'er may wear,
For the light by clouds o'ercast,
For the glories of the past?

Memory bells, memory bells, softly you're ringing.
Through years of long silence I hear you to-day,
Soothing to rest by the notes you are winging.
O, memory bells, shall I tell what you say?
Over long years you are bringing me back,
Over each step of the desolate track;
Over temptation, and yielding, and sin,
Over the hurry, and whirl, and din,
Of a life that is dark, and I kneel once more
At my mother's knee, as I knelt of yore,
While she tells me the story, sweet and brief,
Of "the Man of sorrows acquainted with grief,"
And I hear the lips that have long been clay
Pray for her boy as she prayed that day.
O, memory bells, with your weird strange power,
You have brought back my mother to me this hour,
And brought what you hoarded with faithful care,
Her fervent love and her faithful prayer;
You have stilled in my bosom the tempest wild,
And made me again "as a little child."

Let us give an example or two in learning prose. Here is a passage from Nathan Sheppard's "Before An Audience," page 39: "Straighten up and keep yourself straight. Walk upright. The 'shoulder braces' are of no use except to suggest bracing yourself up. They will not keep your shoulders back, but they will make *you* keep your

shoulders back. They jog the will. When you straighten up for the first time you will find that your clothes do not fit you. Your trousers are too short, and your coat won't button. The tailor measured you at your greatest shrinkage. This physical discipline will suggest and promote physical self-respect, and that in turn will promote moral self-respect. The attitude of dignity dignifies the feeling. Straightening the spine stiffens the moral vertebra."

After what has been said in previous pages, the first sentence of the above quotation has the immediate effect of presenting to your inner senses a straightening up, and keeping straight, and you stand before yourself in a more erect attitude than before. "Walk upright"—as a straight man must. This is equally objective. Here you will observe the golden link of association—standing straight; then his moving, walking, is upright. This latter sense-object readily leads to an observation of shoulders—"the shoulder braces—see them. "No use," "except" one thing: to "suggest bracing yourself up." And here you brace up and throw

the shoulders back as if to relieve the pressure of the "braces."

Go so through each sentence, letting yourself feel or act as suggested by the lines, being careful to note the transition from one sentence to another, and you will be able to give the substance of the whole paragraph after one reading, or of the whole of any ordinary book so read.

The reader may find a little difficulty at first to make his reading objective to the mind, but the effort to do so will amply repay him.

It will certainly take a little more time to read in this way than would be spent in reading simply for pastime, but what is so read will be retained.

I think I have given sufficient illustration to make my meaning clear, and I will therefore conclude this chapter by the request that you will not criticise, but practice what I have suggested in the foregoing pages.

CHAPTER X.

Conclusion.

I CANNOT forbear in closing to make a few general suggestions to those of my readers who have to speak publicly, whether as reciters of plays, or speeches, or sermons—whether borrowed or original productions.

1. Make the matter of your subject objective to yourself—know it in that way. Guard against the slavish tendency to engage yourself with the words alone.

2. Having prepared for your public performance, dismiss the subject from thought, and become thoroughly rested before your public effort.

3. Be fearless, as you will soon learn to be by using my method.

4. Come before your audience without any anxiety—*i. e.*, do not work yourself into a frenzy by

conning the words of your discourse over and over immediately previous to your public appearance. Amuse yourself or engage the mind with something else, so that there will be neither undue excitement nor lassitude of the physical organism that is to be engaged in the reproduction of your discourse.

5. Rely confidently upon the law of Reciprocal-Predication, in the recollection of your speech.

6. In beginning, stand erect before your audience, with lungs expanded. Let the will put a little extra firmness into the muscles,—this promotes the flow of magnetism and produces a feeling of personal strength.

7. Now bring up your first *Thought-Object* before mental vision. Then address yourself in a full, firm voice to the last person in your audience, and in such a pitch and volume of voice as you think will be heard by him. You will instinctively use the right pitch of voice. Engage thought entirely with the *thought-objects* about which you are *speaking*, and do not allow others to intrude upon you until you actually need them. Have no fear about

the recollection of the next point to be made. It will come when you need it.

This method will improve your manner, style of speaking, impressiveness. It will enable you to hold the attention of your audience simply because you are interested by seeing and feeling your whole subject.

Students and Examinations.

I feel that I should, in closing, say a few words specially to students.

It was during my life at college that the possibility of such a work as I have aimed at doing was first presented to mind.

Lay it down as an axiom to be *religiously* observed, that your first duty to self—your fellowmen, and God, is to keep your physical organism in a normal condition, because the mind is dependent upon the physical mechanism.

Eat moderately; exercise your muscular powers in order to maintain the proper balance between the motor and sensient nerves, otherwise you may become an illustration of what Nathan Sheppard has said,

"that the human plant sometimes goes all to top." When this is the case it is sure to wilt soon or late.

Use no stimulants, or if you will, do so very moderately.

Banish narcotics. Many a bright mind has disappeared in a cloud of tobacco smoke.

Study.

There are many methods of study, and some are better suited to some minds than others, but for economy of time and strength, and for availability in recollection, I think it will be generally admitted the topical method is best.

Choose your subject, making it as objective as possible to the mind to begin with, then gather from all sources until you have a great store of knowledge so correlated in memory, that beginning at any point you can go right, left, or in any direction of time, place or quality, etc.

To Learn a Text-Book.

Read according to the foregoing instructions, and as you proceed reduce it to the briefest possible outline. Then do your supplementary readings under

these heads. After a little practice you will be able, if you wish, to quote title, page and author.

Examination.

Many of the brightest students fail in examinations, from nervous weakness or exhaustion, or constitutional nervousness, but the greater number of failures result, 1, from not knowing how to lay hold of knowledge, and 2, ignorance of how to recall all one knows of a subject.

Some have phenomenal word-memories and "cram" themselves with the words they read, then spin them out by the yard, but these are not the men who make life a success.

They are frequently failures in the professions and elsewhere, simply because they have learned the word-clothing of subjects, but not the subjects themselves.

Nothing will so perfectly insure the mastery of your subject as the method I have presented in these pages.

If your subject comes to you, not in nature's form, but at second hand, so to say, *in an artificial form of book, sentence, word or other characters,*

then translate it back to the natural form, as nearly as possible; *e. g.*, if you are studying human anatomy you will do it best by having a body or a manikin before you. If this is not convenient, remember that you possess a natural power to do this mentally, and to refer to every part almost, if not quite, as well as if the body were really present. You will also find it so with all other subjects.

If the student will faithfully pursue my method he will more than double the amount of his work in a given time, insure good memory and ready recollection, develop all his powers more evenly, live longer, and have more real life crowded into each year, and instead of dwindling down into imbecility in old age to bemoan a lost memory and shattered mind, he will have a "green old age," full of mental activity.

FACE-ALPHABET

BEING A DEVICE BY WHICH TO

CERTAINLY REMEMBER

FACES AND NAMES

—BY—

REV. G. A. SCHRAM.

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Face Alphabet.

THIS is a device to aid those who have poor memories for faces and names, and these classes are very common.

Nothing can be more humiliating to a person than to be unable to speak the name of one whom he knows very well, and quite frequently people are insulted by finding you cannot speak their names readily.

This question has given me a great deal of annoyance. For years I often found myself unable to speak the names of quite familiar friends if they suddenly appeared, and what was still more annoying, once when out making pastoral calls, and being asked by a strange lady what my name was, I could not tell her for probably a minute, and possibly I should not have been able to do it at all at the time,

had I not imagined another person addressing me, and speaking my name.

Apart from the fact that general forgetfulness, or failure to recollect arising from mental weariness, indigestion, poor blood and nervous impairment, a poor memory for *faces* or *names*, arises from inattention, and a failure to connect both in one inseparable record of memory so that one will *predicate* the other, *i. e.* if you see the face again or revive it in recollection, the name instantly comes, and *vice versa*.

I need not refer to the many pitiable tricks and devices adopted to aid the memory in these matters, but will at once say that the only association to be made in order to remember faces and names, is an association of the two in one complex record. This will be apparent if we consider the relation of the two in thought and language. The name like any other substantive is evidently intended to be a word-sign of the face, *i. e.* the face not being present I use the name to indicate which particular countenance it is of which I speak. I say the name is a sign for a particular countenance, because it is the

countenance that specially differentiates one person from another. You always look into the countenance to recognize a man.

For some time it puzzled me to devise some means of associating the countenance or features and name in such a way that one would always be, not only a sign of the other, but would also revive the recollection of the other, just as the appearance of a word revives the pronunciation, and its pronunciation also revives the *form* of the word in recollection.

Finally it became evident to me that the nature of this particular case was such that I must find or create something that would be common both to the name and the face.

Accordingly I created an alphabet of such a nature that I could so nearly spell the name with it, that having done so, I could readily speak the name, and that whenever the face was before me, or revived in recollection, it would instantly give me these letters or elementary sounds of the name.

In making this alphabet I kept in view the facts that things associated together in the original perception would *predicate* one another, that the mind

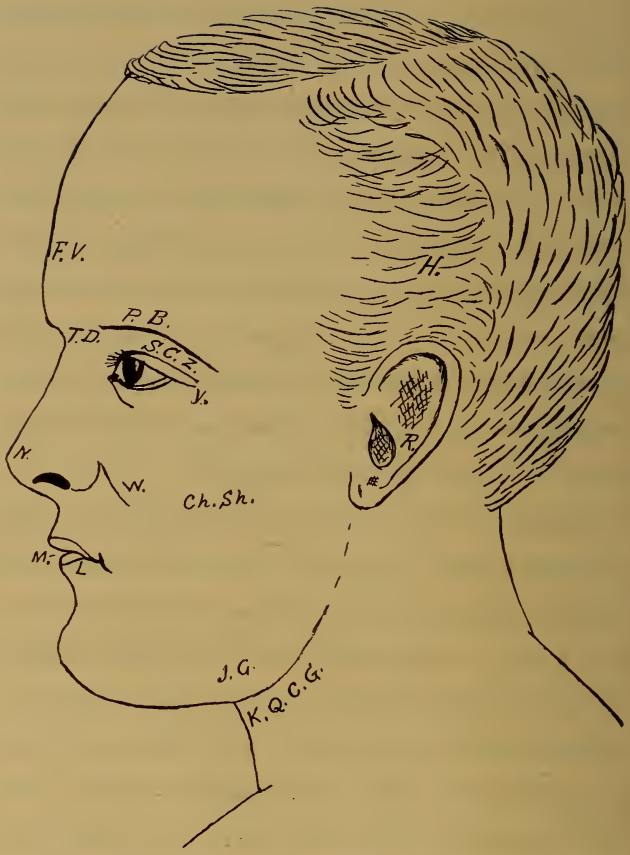
perceived locality, and that it also perceived the direction taken in the process of original attention; and again, that in recollection exactly the same process was repeated in the nervous elements and mental operations, as when these were originally engaged with the original *sense-object*, with the exception that the nervous activities were less intense and generally less prolonged.

Basing my invention upon these principles—I grouped all the consonant sounds that were cognates of one another as they do in stenography; by this means I could represent them all with sufficient clearness by fourteen characters. Then instead of inventing characters I took such as were already in existence, *viz.*, the features of the face.

Thus for the cognates F, V, I used the middle of the forehead a little above the nose. For P. B, the brow. For T, D, the bridge of the nose. S. C, Z, the eye. For J, G, the jaw. For K, Q, and C, G, hard, the throat. For N, the end of the nose; M, the mouth; L, lip; the sound of Ch, Sh, the cheek; W, the line from nose; Y, lines from corner of eye; H, color of hair. Any other arrangement might be

made to answer the purpose, but this is best, because *First*, these features are usually plainly in sight, when looking at a person's face during the first meeting and introduction; *Second*, because the names of these features suggest the letters I make them represent. Thus the word forehead begins with F: Brow with B. T is suggested by the nose and the brow crossing it. S is suggested by *sight*. N is sounded through the nose. H is in *hair*. R is the prominent sound in *ear*. The hard sounds, K, Q, C, G, are produced in the throat, etc.

The first thing to be done is to look at the face given on another page. See where the letters are placed. Begin with the forehead and call it F, V; then bridge of nose, brow, etc. Then lay aside the picture and go through the list from memory—recalling first the face, then the features in order, calling them by their new names as given in the Face Alphabet. You will learn it very readily, and in a few days will use it with great dexterity.



FACE ALPHABET.

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How to Use the Face Alphabet.

Take my own name to illustrate. Supposing we have met, and are introduced by a third party, who speaks my name. You speak the name after him, looking into my countenance. You catch the consonant sounds of the name *Schram*, which are sh-r-m, and these in your Face Alphabet are *cheek* —ear—mouth. Without being detected by me, you notice these three features in the order represented by the consonants of the name, and if attention has been perfect (although it need not be of long duration) you will be able to describe these features of my face and head after I have gone; and every time I am revived in your recollection these three features are prominent and in their original order—on the well-known principle that the best known arises first into the field of recollection. But these features mean to you Sch (or Sh, phonetically,) r-m, which being pronounced in close connection almost perfectly give the name.

Always treat the letters phonetically, dropping one of doubles, and all silent letters. Any name

can be fixed in this way. Be careful for a time to always revive the appearance of the face, when trying to recall the name. In so doing the eye will naturally fall upon the features which originally engaged attention, and these being signs for certain sounds, you will be able to speak the name readily.

If your memory for names has been unreliable before learning and using this device, you need not hope to be cured all at once, nor without a little purposeful attention. And will it not amply repay you if, by putting a little voluntary attention into the use of my device you shall be able to speak the names of persons at will?

The great difficulty to be overcome is your confirmed habit of inattention to names, which is perhaps of life-long standing. This, however, can easily be accomplished. Try it faithfully.

But your special difficulty may not be in remembering names, but faces. It is rarely that the memory is bad for both. I have observed that without exception, if the memory of faces is poor, that for names is fairly good, and often phenomenally so, and

vice versa. Occasionally, however, the memory for both is good.

If face memory is unreliable pursue exactly the same method as that employed in the former case. This so engages attention with the features, or some of them, that they will afterwards be recognized, and besides this a habit of observation of faces will be developed, which will be astonishing in its results.

I have observed in my own case that it has developed a power to draw a face from memory after seeing it only once, and at any time after seeing it. Artists could have no better help in drawing either faces, or any other object from memory, than the instructions given throughout this book.

Practice the above suggestions on every person you meet, and when alone try to revive the image of the face, and the particular features representing the name, and you will be amply repaid.

There is another case that demands a little attention here, that is the names of persons associated with literature, or important events, etc., but whom you have never seen, and probably never will.

In such cases the name must be associated with the event, etc. You must connect the word, both spoken and written, with the event. Get the event, or whatever it may be, clearly represented before the mind. Then speak the name, observing the sounds of the syllables, how they are produced by the organs of speech, also the appearance of the word as written. This process results in several associate records in memory, either of which will revive the others in recollection.

You will probably find that you will generally have to recall the event, etc., with which you originally associated the name, before you can recall the latter, and when the name comes up first in recollection you will instantly think of the associate event. To illustrate: Suppose you have associated the name of the "Iron Duke" Wellington, with the battle of Waterloo. You attend to the sound, syllables—form of word, etc., as associated with the field of Waterloo. Afterwards Waterloo vividly represented to mind will also represent a victorious general leading his army, and therewith will be

repeated the remainder of the original process, which will represent to mind the name.

Should you afterwards see and become acquainted with a person whose name had been so fixed in memory, you would probably be unable readily to speak his name without recalling it as originally fixed in connection with an event of his life. I recently read an article in a leading review, by a distinguished writer and scholar, in which this matter was discussed, and he said that he found difficulty in readily recalling names he had learned in literature, when he afterwards became personally acquainted with them, without recalling first the event with which he originally found them associated.

This difficulty can, however, be overcome very readily by changing the association from the event to the features of the face, by using the face alphabet.

Then when the face appears before you it *predicates* the name just as if it had been originally so fixed in memory.

I cannot furnish a proper exercise on the Face Alphabet without taking up too much space, as it

would need to be a number of different faces called by different names.

These faces and names the student would have to fix in memory, just as if real persons of different names were before him.

You will, however, find the best of exercise in the faces of the persons you meet each day.

Let me guard you against forgetting to use the *Face Alphabet*, when forming a new acquaintance. Your old habit of inattention to face or name, or both, as the case may be, will cling to you unless you resolve to overcome it by using the *Face Alphabet*.

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